

Applicants: Philip O. Livingston and Friedhelm Helling
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--97. (3x amended) A composition which comprises:

a) a conjugate of i) a GM2 ganglioside derivative which comprises an unaltered oligosaccharide part and an altered ceramide portion comprising an altered sphingosine base, to ii) Keyhole Limpet Hemocyanin, comprising an ϵ -aminolysyl group;

b) a saponin derivable from the bark of a Quillaja saponaria Molina tree; and

c) a pharmaceutically acceptable carrier;

T1
the relative amounts of such conjugate and such saponin being effective to stimulate or enhance antibody production in a subject,

wherein in the conjugate the ganglioside derivative is covalently bound to Keyhole Limpet Hemocyanin by a stable amine bond between the C-4 carbon of the altered sphingosine base of the altered ceramide portion of the ganglioside derivative and the nitrogen of the ϵ -aminolysyl group of Keyhole Limpet Hemocyanin.--

T2
--111. (3x amended) A method of stimulating or enhancing antibody production in a subject which comprises administering to the subject an effective amount of a composition which comprises:

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a) a conjugate of i) a GM2 ganglioside derivative which comprises an unaltered oligosaccharide part and an altered ceramide portion comprising an altered sphingosine base, to ii) Keyhole Limpet Hemocyanin comprising an ϵ -aminolysyl group;

b) a saponin derivable from the bark of a Quillaja saponaria Molina tree; and

c) a pharmaceutically acceptable carrier;

I 2
UV
the relative amounts of such conjugate and such saponin being effective to stimulate or enhance antibody production in a subject, wherein in the conjugate the ganglioside derivative is covalently bound to Keyhole Limpet Hemocyanin by a stable amine bond between the C-4 carbon of the altered sphingosine base of the altered ceramide portion of the ganglioside derivative and the nitrogen of the ϵ -aminolysyl group of Keyhole Limpet Hemocyanin, so as to thereby stimulate or enhance antibody production in the subject.--

--113. (3x amended) A method of treating a cancer in a subject which comprises administering to the subject an effective cancer treating amount of a composition which comprises:

I 3
a) a conjugate of i) a GM2 ganglioside derivative which comprises an unaltered oligosaccharide part and an altered ceramide portion comprising an

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altered sphingosine base, to ii) Keyhole Limpet

Hemocyanin comprising an ϵ -aminolysyl group;

b) a saponin derivable from the bark of a Quillaja
saponaria Molina tree; and

c) a pharmaceutically acceptable carrier;

the relative amounts of such conjugate and such
saponin being effective to stimulate or enhance
antibody production in a subject,

wherein in the conjugate the ganglioside derivative
is covalently bound to Keyhole Limpet Hemocyanin by
a stable amine bond between the C-4 carbon of the
altered sphingosine base of the altered ceramide
portion of the ganglioside derivative and the
nitrogen of the ϵ -aminolysyl group of Keyhole
Limpet Hemocyanin, so as to thereby treat the
cancer in the subject.--